

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1. (currently amended): An isolated immunogenic detoxified protein comprising the amino acid sequence of subunit A of a cholera toxin (CT-A) or the amino acid sequence of subunit A of an *Escherichia coli* heat labile toxin (LT-A) wherein the amino acids at positions corresponding to Ser-63 and Arg-192 of SEQ ID NO:7 or SEQ ID NO:8 are replaced with another amino acid, and further wherein the amino acid at position corresponding to Ser-63 is replaced with a lysine residue and the amino acid corresponding to position Arg-192 is replaced with a glycine or an asparagine residue.
2. (previously presented): A vaccine composition comprising an immunogenic detoxified protein according to claim 1 and a pharmaceutically acceptable carrier.
3. (original): A vaccine composition according to claim 2 further comprising an adjuvant.
4. (previously presented): A vaccine composition according to claim 2 further comprising a second immunogenic antigen.
- 5 to 9. (canceled).
10. (withdrawn): A method of vaccinating a mammal against *Vibrio cholerae* or an entertoxygenic strain of *Escherichia coli* comprising administering an immunologically effective amount of an immunogenic detoxified protein according to claim 1.

11. (withdrawn): A method for the prevention or treatment of disease in a subject comprising administering to the subject an immunologically effective dose of a composition according to claim 4.

12. (withdrawn): A process for the formulation of a vaccine comprising bringing an immunogenic detoxified protein according to claim 1 into association with a pharmaceutically acceptable carrier.

13. (withdrawn): The process according to claim 12, further comprising bringing the vaccine into association with an adjuvant.

14. (withdrawn): The process according to claim 12, further comprising bringing the vaccine into association with a second antigen.

15. (withdrawn): The immunogenic detoxified protein of claim 1, wherein the protein comprises the amino acid sequence of subunit A of a cholera toxin (CT-A) or a fragment thereof.

16. (withdrawn): The immunogenic detoxified protein of claim 15, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192 or Gly-192.

17. (withdrawn): The immunogenic detoxified protein of claim 16, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192.

18. (withdrawn): The immunogenic detoxified protein of claim 16, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Gly-192.

19. (previously presented): The immunogenic detoxified protein of claim 1, wherein the protein comprises the amino acid sequence of subunit A of an *Escherichi coli* heat labile toxin (LT-A).

20 to 22. (canceled).

23. (previously presented): The immunogenic detoxified protein of claim 2, wherein the detoxified protein has a toxicity of less than 0.01% of the naturally occurring toxin counterpart.

24. (withdrawn): The immunogenic detoxified protein of claim 15, further comprising at least one CT subunit B.

25. (previously presented): The immunogenic detoxified protein of claim 19, further comprising at least one LT subunit B.